

Sandia National Laboratory Completes Major Milestone

The Sandia National Laboratory (SNL) in Albuquerque, New Mexico, has completed a major milestone - the excavation of the Chemical Waste Landfill (CWL) to a depth of 12 feet. The CWL was the most challenging of five landfills at SNL scheduled for remediation. The excavation was completed without any significant injuries despite the diversity of hazardous chemicals, radioactive materials, medical waste, batteries, compressed gas cylinders, and other debris that were buried at this site.

The CWL is a 1.9-acre site used for disposal of chemical wastes generated by SNL's research laboratories from 1962 until 1985. Over 2,000 intact chemical containers with unknown contents were excavated from the landfill. These containers presented real and potential hazards ranging from leaking hydrofluoric acid to shock sensitive compounds.

This variety of unusual hazards was effectively mitigated by utilizing Integrated Safety Management practices, use of appropriate personal protective equipment, and an experienced team with specialized knowledge and training. Extensive emergency planning and frequent communication with workers at neighboring facilities ensured off-site safety. Explosion shielding on equipment and the use of supplied air respirators prepared site workers for a worst-case event that was never realized. One-hundred and fifty-thousand man-hours were expended performing this extremely hazardous operation at SNL without serious injury.

During remediation of the CWL, approximately 45,000 cubic yards of material were excavated and safely managed, including 3,700 cubic yards of polychlorinated biphenyl contaminated waste. Most of the contaminated soils will be taken to the nearby Corrective Action Management Unit for treatment and management. The remaining soils were qualified as replaceable backfill material using negotiated risk-based levels and field laboratory data.

As a waste minimization effort, this risk-based replaceable soils strategy was negotiated with the New Mexico Environment Department. As a result, the excavation was completed three months ahead of schedule and cleaner excavated soils, which passed risk-based criteria, were used as backfill material. The savings in off-site disposal costs for minimally contaminated soils was approximately \$16 million, and the excavation to a depth of 12 feet was completed without any significant injuries to workers. ■

For more information contact Amiya Das, at (301) 903-7603 or e-mail at Amiya.Das@em.doe.gov